

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of claims:

1. (Currently Amended) A method for treating diabetes which comprises administering to a mammalian species in need of treatment a therapeutically effective amount of an aP2 inhibitor, wherein the aP2 inhibitor includes an oxazole or analogous ring selected from the group consisting of a substituted benzoyl or biphenyl-2-oxazole-alkanoic acid derivative, an oxazole derivative, a 2-thio-4,5-diphenyloxazole S-derivative, a phenyl-heterocyclic oxazole derivative, a diaryloxazole derivative, a 4,5-diphenyloxazole derivative, an oxazole carboxylic acid derivative, a phenyloxazolyloxazole derivative, or a 2-(4,5-diaryl)-2-oxazolyl substituted phenoxyalkanoic acid derivative.

2. (Original) The method as defined in Claim 1 wherein the aP2 inhibitor binds to the aP2 protein and inhibits its function and/or its ability to bind free fatty acids.

3-4. (Cancelled)

5. (Previously Amended) The method as defined in Claim 1 where said aP2 inhibitor contains a substituent which binds within and/or interacts with a discrete pocket within the aP2 protein defined by the amino acid residues designated Phe 16, Tyr 19, Met 20, Val 23, Val 25, Ala 33, Phe 57, Thr 74, Ala 75, Asp 76, Arg 78 in human aP2 (SEQ ID NO: 1).

6. (Previously Amended) The method as defined in Claim 5 wherein said substituent in said aP2 inhibitor is hydrophobic in nature.

7. (Original) The method as defined in Claim 5 in which the through space distance from the hydrogen bond donor/acceptor group and the additional substituent group in said aP2 inhibitor is within the distance of about 7 to about 15 Angstroms.

8. (Original) The method as defined in Claim 1 wherein Type II diabetes is treated.

9. (Original) The method as defined in Claim 1 wherein the aP2 inhibitor is employed in the form of a pharmaceutically acceptable salt thereof or a prodrug ester thereof.

10. (Previously Cancelled)

11. (Cancelled)

12-13. (Cancelled)

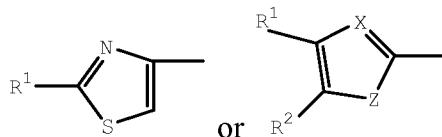
14. (Currently Amended) ~~The A~~ method for treating diabetes which comprises administering to a mammalian species in need of treatment a therapeutically effective amount of an aP2 inhibitor, as defined in Claim 1 wherein the aP2 inhibitor is

(I) a substituted benzoylbenzene or biphenyl alkanoic acid derivative having the structure:

I A(CH₂)_nO-B

wherein

A is a group having the formula



wherein

X is -N-;

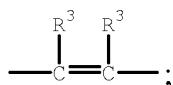
Z is

—S—, or —O—;

R¹ is hydrogen, lower alkyl or phenyl;

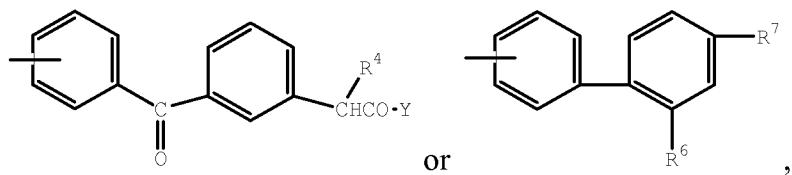
R² is hydrogen or lower alkyl; or

R¹ and R² taken together form a benzene ring, with the proviso that when X is -N-, Z is other than



n is 1-2;

B is



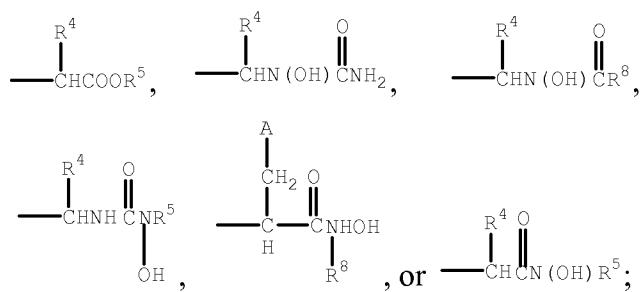
wherein

Y is OR⁵ or N(OH)R⁸;

R⁴ and R⁵ are each, independently, hydrogen or lower alkyl;

R⁶ is hydrogen, halo or nitro;

R⁷ is



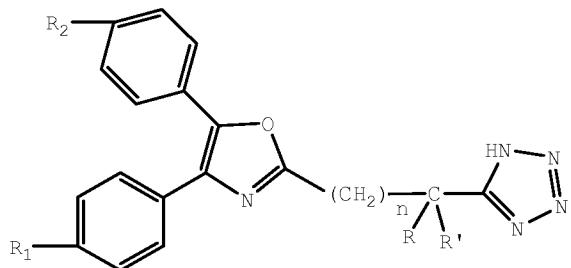
R⁸ is lower alkyl;

m is 0-3;

or a pharmacologically acceptable salts thereof;

(II) oxazole derivatives which have the structure

II



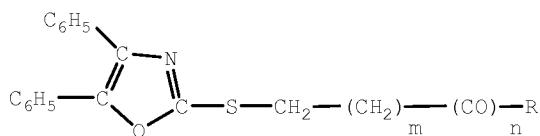
in which;

R and R' are identical or different and represent a hydrogen atom or an alkyl radical containing 1 or 2 carbon atoms,

R₁ and R₂ are identical or different and represent hydrogen or halogen atoms or alkoxy radicals in which the alkyl portion contains 1 to 4 carbon atoms in a straight or branched chain, and n equals 3 to 6, as well to their salts;

(III) 2-thiol-4,5-diphenyloxazole S-derivatives which have the structure

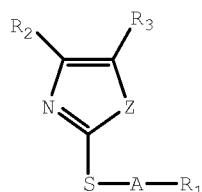
III



wherein m is 0, 1 or 2, n is 1 and R represents hydroxy, alkoxy or amino, and pharmaceutically acceptable addition salts thereof;

(IV) azole derivatives of the structure

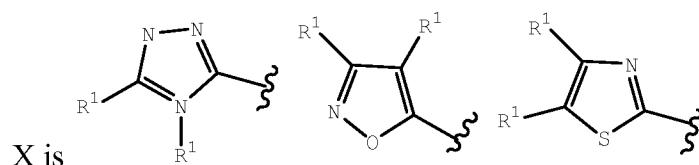
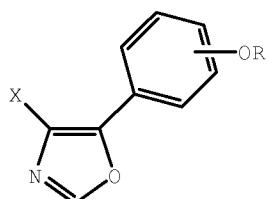
IV

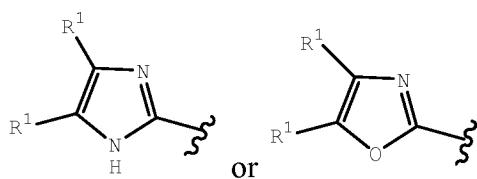


wherein R₁ is carboxyl, esterified carboxyl or other functionally modified carboxyl group; R₂ and R₃ each are aryl of up to 10 carbon atoms; A is C_nH_{2n} in which n is an integer from 1 to 10, inclusive; and Z is O or S, and physiologically acceptable salts thereof;

(V) phenyl-heterocyclic oxazole derivatives which have the structure

V

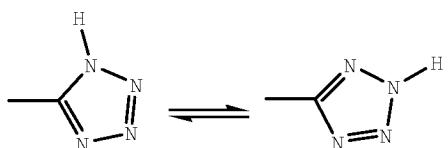




R is CH_2R^2 ;

R^1 is Ph or Th;

R^2 is



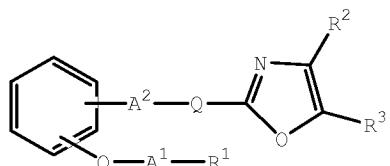
CO_2R^3 ; and

R^3 is H, or C₁-C₄ lower alkyl;

or pharmaceutically acceptable salt thereof;

(VI) diaryloxazole derivatives having the structure

VI



wherein R^1 is carboxy or protected carboxy,

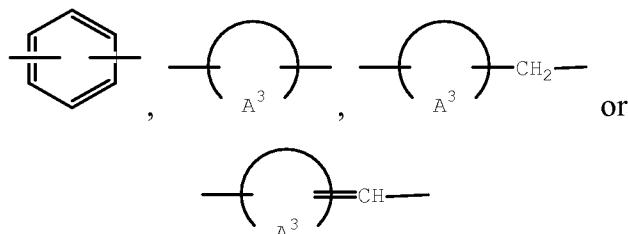
R² is aryl,

R³ is aryl,

A¹ is lower alkylene,

A² is bond or lower alkylene and

-Q- is



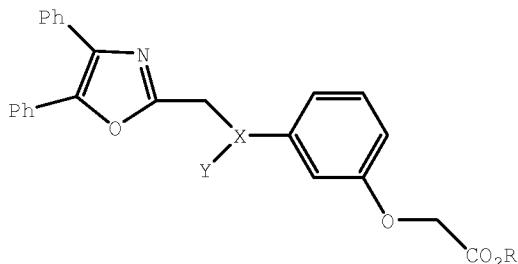
(in which is cyclo (lower)alkane or

cycle(lower)alkene,

each of which may have suitable substituent(s));

(VII) 4,5-diphenyloxazole derivatives having the structure

VIIA



wherein

R is H or C₁-C₅ lower alkyl,

X is N or CH,

Y is H or CO₂R¹, or COR², provided that when X is CH, Y is not H,

R¹ is C₁-C₅ lower alkyl, or phenylmethyl, and

R² is C₁-C₅ alkyl; or

VIIIB



wherein

R is H or C₁-C₅ lower alkyl,

X is (CH₂)_n or para or meta substituted phenyl wherein the substituent is OR²,

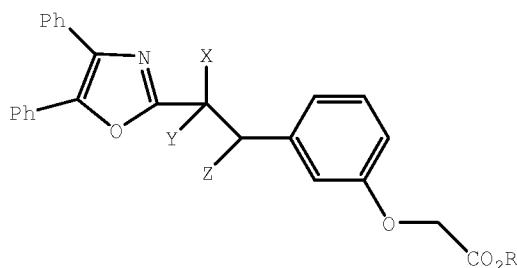
R² is C₁-C₅ alkyl, and

n is an integer of 4 to 8,

and pharmaceutically acceptable salts thereof;

(VIII) oxazole carboxylic acid derivatives having the structure

VIII



wherein

Y and Z are independently hydrogen or together form a bond;

X is CN, CO₂R¹ or CONR²R³;

R and R¹ are independently or together H, Na, or

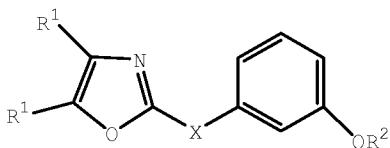
C₁-C₅ lower alkyl;

R² and R³ are independently or together H, or C₁-C₅ lower alkyl;

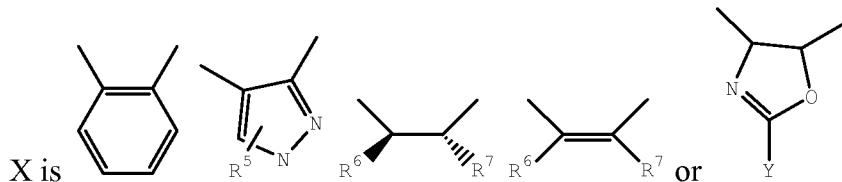
or alkali metal salt thereof;

(IX) phenyloxazolyloxazole derivatives having the structure

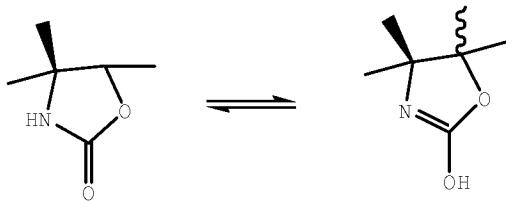
IX



wherein



Y is CH₃, Ph, or OH, provided that when Y is OH, the compound exists in the keto-enol tautomerism form



R¹ is Ph or Th;

R² is CH₂R³;

R³ is CO₂R⁴;

R⁴ is H or C₁-C₅ lower alkyl;

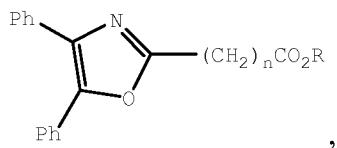
R⁵ is H or CH₃; R⁶ is OHCHN or H₂N; and

R⁷ is H or OH;

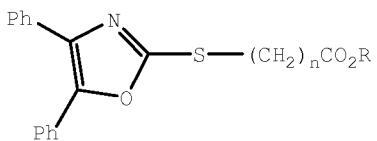
or pharmaceutically acceptable salt thereof;

(X) 2-(4,5-diaryl)-2-oxazolyl substituted phenoxyalkanoic acids and esters having the structure

XA

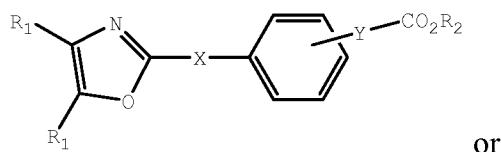


XB



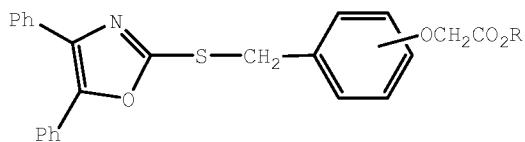
(wherein n is 7-9 and R is hydrogen or lower alkyl; or when R is hydrogen, the alkali metal salt thereof),

XC



or

XD



wherein

R₁ is phenyl or thiienyl;

R₂ is hydrogen, lower alkyl or together with CO₂ is tetrazol-1-yl;

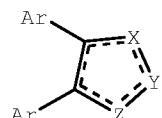
X is a divalent connecting group selected from the group consisting of CH₂CH₂, CH=CH, and CH₂O;

Y is a divalent connecting group attached to the 3- or 4-phenyl position selected from the group consisting of OCH₂, CH₂CH₂ and CH=CH,

or when R₂ is hydrogen, an alkali metal salt thereof;

(XI) substituted 4,5-diaryl heterocycles having the formula

XI



in which

each group Ar is the same or different and is optionally substituted phenyl or optionally substituted heteroaryl;

X is nitrogen;

Y is C(CH₂)_nA;

Z is oxygen, and the dotted line indicates the optional presence of a double bond so as to form a fully unsaturated heterocyclic ring;

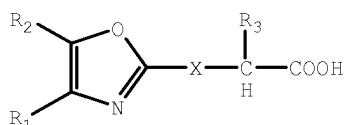
n is 4 to 12; and

A is CO₂H or a group hydrolysable to CO₂H,

5-tetrazolyl, SO₃H, P(O)(OR)₂, P(O)(OH)₂, or P(O)(R)(OR) in which R is hydrogen or C₁₋₄alkyl, or a pharmaceutically acceptable salt thereof;

(XII) compounds which have the structure

XII



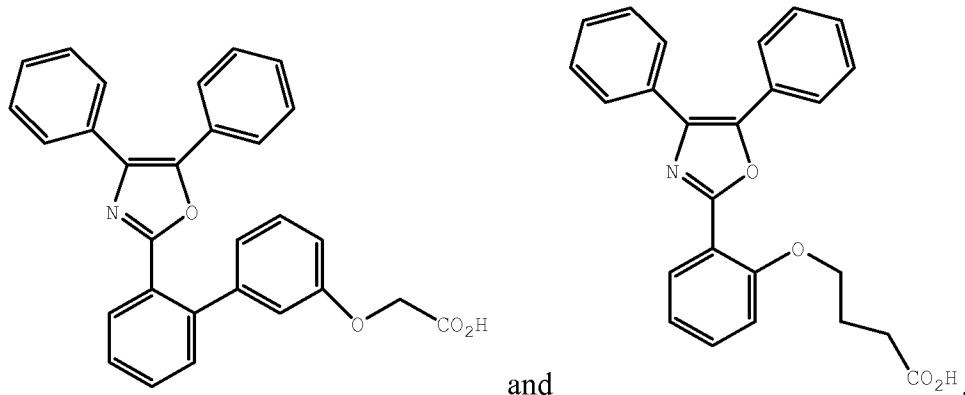
Where X is O or S;

R₁ is H, phenyl or phenyl substituted with F, Cl or Br or alkoxy,

R₂ is H, alkyl, phenyl or phenyl substituted with F, Cl or Br or alkoxy, and

R₃ is H or alkyl.

15. (Previously Amended) The method as defined in Claim 1 wherein the aP2 inhibitor has the structure



16-20. (Previously Cancelled)